REMARKS

Claims 1-4, 7-12, and 14-27 are pending, with Claims 1, 24, and 25 being independent. Reconsideration in view of the following remarks is respectfully requested.

Claim Rejections – 35 U.S.C. § 103

Claims 1-4, 7-12, and 14-27 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent No. 6,451,703 ("Liu") in view of U.S. Patent No. 6,228,438 ("Schmitt"). Applicants respectfully disagree with this rejection; therefore, the rejection is respectfully traversed.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. *See* MPEP § 2143.

Claims 1, 24, and 25 recite, *inter alia*, a dual frequency capacitively coupled plasma reactor and RF energy is supplied at two different frequencies to either the bottom electrode or at different first and second frequencies to the showerhead electrode and bottom electrode. The Office Action acknowledges that the claimed invention differs from Liu by specifying a dual frequency capacitively coupled plasma reactor including an upper showerhead electrode and a bottom electrode. The Office Action assets that Liu teaches using capacitively coupled plasma reactor including an upper showerhead electrode and a bottom electrode. (Page 3).

However, rather than disclosing an upper showerhead electrode, Liu actually discloses that processing gases are supplied to a ***quartz*** gas distribution plate positioned in the roof of the chamber overlying the wafer. (Column 4, Lines 34-38).

The Office Action relies on Schmitt to show a dual frequency capacitively coupled plasma reactor including an upper showerhead electrode and a bottom electrode. The Office Action asserts that it would have been obvious to one with ordinary skill in the art to incorporate those features as disclosed by Schmitt in the process of Liu in order to separately control the upper electrode and lower (bottom) electrode. (Page 3). Schmitt discloses connecting an upper showerhead electrode to a high frequency (higher than 30 MHz) source. (Column 8, Lines 1-95).

Applicants respectfully submit that there is neither any motivation to combine Liu and Schmitt nor a reasonable expectation of success in combining Liu and Schmitt. Specifically, the ***quartz*** gas distribution plate of Liu may not be connected to a high frequency source as disclosed by Schmitt. Thus, Applicants respectfully submit that Liu in view of Schmitt does not teach or suggest all the claim limitations. Specifically, Liu in view of Schmitt does not teach or suggest a dual frequency capacitively coupled plasma reactor with RF energy applied at two different frequencies to either the bottom electrode or at different first and second frequencies to the showerhead electrode and bottom electrode.

For at least the reasons set forth above, Applicants respectfully submit that the pending claims are allowable. Withdrawal of the rejections is respectfully requested.

CONCLUSION

From the foregoing, further and favorable action in the form of a Notice of Allowance is earnestly solicited. Should the Examiner feel that any issues remain, it is requested that the undersigned be contacted so that any such issues may be adequately addressed and prosecution of the instant application expedited.

Respectfully submitted,

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